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Vertical Arrangements and Organizational Structure in Food Retailing: An Analysis of the Fast Food Market Using Establishment-Level Data

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Introduction

A topic of interest among economists studying the food and agricultural industries is methods and reasons for vertical coordination between firms at different stages in the production process, and incentives to vertically integrate. Often the focus is on coordination mechanisms between upstream producers and downstream processors, wholesalers, or retailers. This paper examines organizational form in the retail foodservice industries, specifically focusing on retail establishments which can be either vertically coordinated or integrated with a large regional or national parent organization.

Like many retail and manufacturing industries, retail foodservice is increasingly dominated by large firms. But the overwhelming majority of retail establishments in this industry are owned and operated independently, albeit vertically coordinated with a large parent organization. A typical example is an independently owned fast food outlet operating under a franchise agreement with McDonald's or Burger King. Focusing on the retail fast food industry, this research examines a firm's decision to either operate its own network of retail outlets, or to use franchising as a method of vertical coordination with independent retail outlets.

This topic has been explored by previous researchers, but little attention has focused on the role of local market conditions in influencing this decision, and particularly the potential for either a franchiser or a franchisee to gain market power within the local retail market. These issues are explicitly addressed here. The typical framework for analyzing franchise decisions is based on principal-agent relationships, specifically the difficulty faced by the principal in monitoring the activities of downstream firms or divisions (e.g. Lafountaine and Slade, 1996; Kreuger, 1991; Brickley and Dark, 1987; Rubin, 1978; among others). This also is the framework used here, with an empirical analysis based on establishment-level data.

The Fast Food Industry

Unlike many other consumer-oriented industries (e.g. grocery retailing, general merchandise department stores, consumer banking), the number of firms and establishments in the “eating places” industry (SIC 58) has grown steadily for several decades and, presumably, continues to grow. This is a trait often associated with markets exhibiting strong and growing demand with low barriers to entry. Table 1 reports the number of firms and establishments operating in the restaurant and fast food industries between 1977 and 1992. Table 2 reports the incidence of multi-establishment ownership in the restaurant and fast food industries, and the national four and eight firm concentration ratios in these market segments.

The figures in tables 1 and 2 imply that the restaurant and fast food segments are quite fragmented, with single establishment outlets dominating the industry. However, even as the number of firms and establishments increase, the number of firms operating multiple establishments in the restaurant and fast food industries has increased as well, with an even greater increase in the percent of total restaurant and fast food sales through outlets operated by multi-establishment firms. While concentration of ownership and sales still appears to be quite low at the establishment level, these figures fail to capture industry concentration at the firm level. Especially in fast food, the role of franchising as an organizational form, and its effect on concentration, cannot be ignored. Although table 2 shows that, based on establishment ownership, the four largest firms in the industry only controlled about 11.9 percent of total fast food sales in 1992, company records indicate that the combined sales of all McDonald’s, Tricon (owners of Taco Bell, KFC, and Pizza Hut brand names), Burger King, and Wendy’s units accounted for over 48% of 1997 sales in the fast food category. Clearly, many establishments, whether they are owned individually or are or operated by a multi-establishment firm, are in fact coordinated with one of these larger organizations.

Table 3 reports figures from the Census of Retail Trade on the use of franchising in the restaurant and fast food industries from1977 to 1992. Over this period (the first four columns of table 3), the proportion of fast food establishments that were individually owned but operated under a franchise agreement was relatively steady, ranging between about 27.5 and 33.4 percent.

Table 1. Firms and Establishments in the Restaurant and Fast Food Industries. Source:

Census of Retail Trade.

	1977	1982	1987	1992
Restaurants:				
Firms	107,097	106954	134,940	148,068
Establishments	118,896	258584	154,721	170,183
Fast Food:				
Firms	67,113	75447	89,776	105,538
Establishments	92,357	109353	138,104	164,341

Table 2. Incidence of multi-establishment ownership in the retail foodservice industry and national sales concentration based on ownership. Source: Census of Retail Trade.

	1977	1982	1987	1992
Fast Food Firms:				
Percent of firms operating Multiple units	5.98	8.49	8.92	9.31
Percent of establishments operated by multi-unit firms	31.68	36.87	40.79	41.76
Percent of total sales by Multi-Unit firms	50.95	57.63	63.77	64.10
Sales CR4	9.1	9.0	10.6	11.9
Sales CR8	13.2	13.7	14.9	16.0
Restaurant Firms:				
Percent of firms operating Multiple units	1.96	4.06	3.80	3.70
Percent of establishments operated by multi-unit firms	11.69	16.48	16.10	16.21
Percent of total sales by Multi-Unit firms	26.18	33.42	35.91	37.65
CR4	4.9	5.6	6.9	7.8
CR8	7.4	9.0	10.3	10.6

Table 3. Use of Franchising by firms in the fast food and restaurant industries [1/]

	1977	1982	1987	1992	1992[3/]
Fast Food Outlets	92357	109353	138104	164341	
Franchised[2/]	30876	30057	43823	53211	85771
Independent	61481	79296	94281	111130	78570
Percent Franchised	33.43	27.49	31.73	32.38	52.19
Franchise Percent of Sales	50.51	38.67	43.66	41.89	72.57
Restaurant Outlets	118896	122851	154721	170183	
Franchised[2/]	7196	6751	9001	9415	16980
Independent	61481	116100	145720	160768	153203
Percent Franchised	6.05	5.98	5.82	5.53	9.98
Franchise Percent of Sales	8.9	7.19	7.57	8.52	16.22

1/. Source: Census of Retail Trade, Miscellaneous Subjects, Various Issues.
2/. Owned independently, operated under a franchise agreement
3/. Second column for 1992 refers to franchising as "operating under a franchise trade name" which includes both independently owned outlets and outlets owned by a franchiser.

The proportion in the table-service restaurant category was significantly less, ranging between 7 and 9 percent. Interestingly, the percent of fast food sales through independently owned franchise establishments, while greater than the percent of outlets in each year, has decreased by nearly 10 percentage points between 1977 and 1992. In the restaurant segment, the percent of sales through independent franchisees has stayed relatively stable over time.

The last column of table 3 reports 1992 figures based on a slightly different definition of franchised outlets[1]. Here, franchised outlets include both independently owned outlets, as well as outlets that operate under a franchised trade name but are owned and operated by the franchiser. Comparing the two columns for 1992 shows that approximately 20 percent of the outlets operating under a franchise trade name are in fact owned by the franchiser. These company owned, vertically integrated outlets account for nearly 30 percent of sales through all outlets associated with a franchise trade name.

That sales through company owned fast food outlets are on average somewhat greater than those operated by franchisees implies some gains to vertical integration. But in the retail

[1] Similar figures for 1977-1987 are not published by the Census.

industries demand is determined in the local market, so this relationship might just reflect franchiser strategy to develop the most lucrative markets themselves while designating less desirable markets for franchisee development. This research explores the characteristics of company owned and franchisee owned fast food establishments, and focuses on the incentives for firm expansion through either vertical integration or coordination with independent franchisees. The implications for local market power and retail pricing are also discussed.

Franchising in the Fast Food Industry

As noted above, a large proportion of establishments in the retail fast food industry are independent businesses operating under a franchise agreement with a parent firm, the franchiser. The franchiser develops a product or service which the franchisee markets in a particular location. In concept, this is similar to any manufacturer which seeks to distribute its product to spatially dispersed consumers through downstream firms specializing in the retail function. In traditional franchising, the franchiser produces a product which is sold through licenced independent businessmen who receive a markup over their cost of the product. Typical examples are gasoline stations or automobile dealerships. In the fast food industry, as well as most other service industries such as hotels or maid services, the relationship is somewhat different because production occurs at the retail establishment. Here, the parent organization supplies only a trademark, management and advertising support, a business plan, and product and quality specifications. This is known as “business format” franchising[2].

In a business format franchise, the franchiser generates revenue form some combination of an initial fixed fee paid by the franchisee, and a royalty rate that is generally based on sales revenue. This royalty rate is essentially as a tax on output which raises the costs to the franchisee. The existence of the royalty rate puts the objectives of the franchiser somewhat at odds with those of the franchisee, especially if the franchisee has some monopoly power in the local market . This is illustrated in figure 1. The franchiser receives a constant revenue stream

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[2] For the remainder of this paper, franchising refers only to “business format” franchising.

from the royalty rate for which no direct costs are incurred, thus the profit maximizing franchiser prefers that the franchisee maximize revenue by setting output equal to Q_1, where marginal revenue is zero. An independent retailer, on the other hand, wishes to maximize profit, thus setting output where marginal revenue equals marginal cost, i.e. restricting output to $Q_{2.}$

The franchiser derives market power in the product market from the brand name or reputation of the item being sold under contract by the franchisee, thus enabling him to charge the fixed fee and royalty rate. Franchiser advertising can differentiate the product and help to maintain market power. From the retailer's standpoint, market power is more a function of the number of competing retail outlets in the local market, many of which might be carrying the same, or a nearly identical product. In a market with few retail outlets, independent retailers have the incentive to restrict quantity and receive monopoly profits. This "double marginalization" reduces the overall profits to the chain, i.e. the franchiser.

Furthermore, since production occurs at the retail establishment, the franchisee has strong incentives to reduce production costs. This could be achieved by shirking on the quality standards that are set by the franchiser. Moral hazard arises on the part of independent retailers who may see it in their personal best interest to allow their own quality to slide while counting on the reputation of the chain, i.e. the other retailers and the parent organization, to provide monopoly rents from successful advertising campaigns and a strong customer base. Although the parent firm can set quality specifications as part of the franchise agreement, law prohibits the franchiser from engaging in tying agreements that require the franchisee to use particular input suppliers (Klein and Saft, 1985).

The above situations would imply that it is in the best interest of the franchiser to vertically integrate to capture any excess profits being generated by retail market power, and to protect brand reputation. But this desire for vertical integration is balanced by agency costs that can be incurred by the franchiser operating his own retail establishments. These agency costs have been studied by several researchers (e.g. Lafountaine and Slade, 1996; Krueger, 1991; Caves and Murphy, 1976).   Outlet managers who are company employees often lack the incentives to minimize costs and monitor their own employees since their salary is not directly and solely dependent on outlet profitability. Hence without extensive monitoring by company executives, company owned retail outlets might not be operated in the most efficient manner possible. Plus, the large labor requirements of operating several (especially hundreds or thousands) of retail establishments would itself be a potential source of agency costs in an organization by requiring immense managerial oversight. An owner-manager of a franchise is likely to expend extra effort supervising, monitoring, and managing his employees and business operations since he receives the residual profit generated by the enterprise. These same forces should provide franchisee motivation to control operating costs and promote sales at retail and, perhaps, maintain quality to encourage repeat customers.

The decision of whether to operate retail units internally or to franchise, as well as the location of franchisee owned and company owned establishments, lies ultimately with the franchiser. Thus, the franchiser will choose the profit maximizing organizational form for each establishment in each market. Since the franchiser is motivated by profits, he must balance agency cost savings from franchisee owned outlets with potential losses in monopoly profits from double marginalization that could result from independent retailers exploiting their own monopoly power in the local market. Blair and Kasserman (1984) and others show how contact terms, i.e. the royalty rate and fixed franchise fee, can be adjusted to minimize double marginalization and align franchiser and franchisee incentives, but the fact remains that most firms do not adjust contract terms for individual outlets.

The franchiser has at his disposal other means of reducing the monopoly power of franchisee owned establishments and hence downstream profits. One way is through increasing the number of competing retailers in those markets where few franchisees control a large share of the output. A common complaint among franchise holders is “territorial encroachment”, a strategy by which the parent firm locates additional outlets ostensibly within the market area of existing outlets. Since these additional outlets are selling products that are identical to those sold by the existing outlets, demand faced by the retailer becomes more elastic, and downstream profits (and prices) for individual outlets are decreased through competition. The demand for the product itself, which is influenced through advertising and quality characteristics, remains inelastic and is the source of chain profits. Thus, the retailers facing an elastic local demand are forced to price competitively, revenue to the franchiser is maximized, and the royalty rate (r), i.e. tax on output is passed on to the consumer in the form of a higher product price. Retailer price approaches his marginal cost. This is illustrated in figure 2.

Most theoretical and empirical analyses of franchising assume that franchisees own only a single establishment. This provides the strongest argument for agency cost savings, since the owner is assumed to actively manage a single establishment. But in some instances a franchisee might himself manage several local franchises. Empirical evidence suggests that these "franchisee owned mini-chains" are pervasive in the fast food industry. Table 2 (above)shows that, while the majority of fast food establishments are still operated as single establishment units, the number of multi-establishment units has been steadily increasing since at least 1977. Furthermore, the proportion of sales through multi-establishment units exceeded 64 percent by 1992. In the table-service restaurant segment, single establishment outlets still account for the majority of sales, but here too multi-establishment firms are gaining in importance.

This suggests possible economies of scale in retail operations. Another possibility is that franchisers recognize the difficulty in obtaining reliable franchisee partners, and might be willing to allow successful franchisees to expand their operation by obtaining additional locations. Plus, operators of local establishments would be expected to have a greater knowledge of local demand conditions, which could provide an incentive for the franchiser to allow existing owners to operate additional units within the same, or demographically, similar markets. Supporting this conjecture, Kalnins and Lafountiane find that outlets owned by multi-establishment franchisees tend to be contiguously located in markets of similar demographic characteristics.

It is also common practice for franchisers to enter into "area development agreements" with franchisees that agree to establish a pre-specified number of units in an exclusive territory over a set length of time. In these situations, the franchisee might have additional bargaining power over the franchiser, and the ability to negotiate superior contract terms that might allow for greater downstream profits. Territorial encroachment would perhaps be less of a threat to franchisees that are given an exclusive right to a certain market area, if they can negotiate a lower

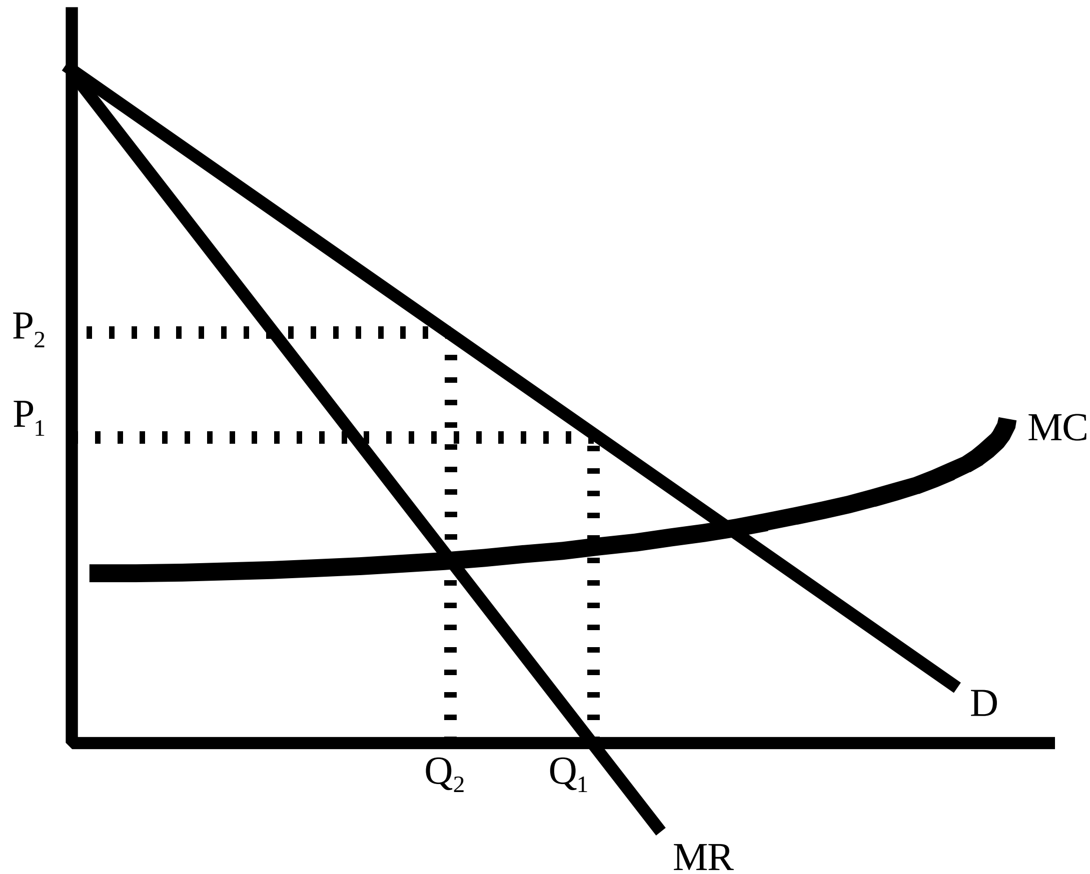
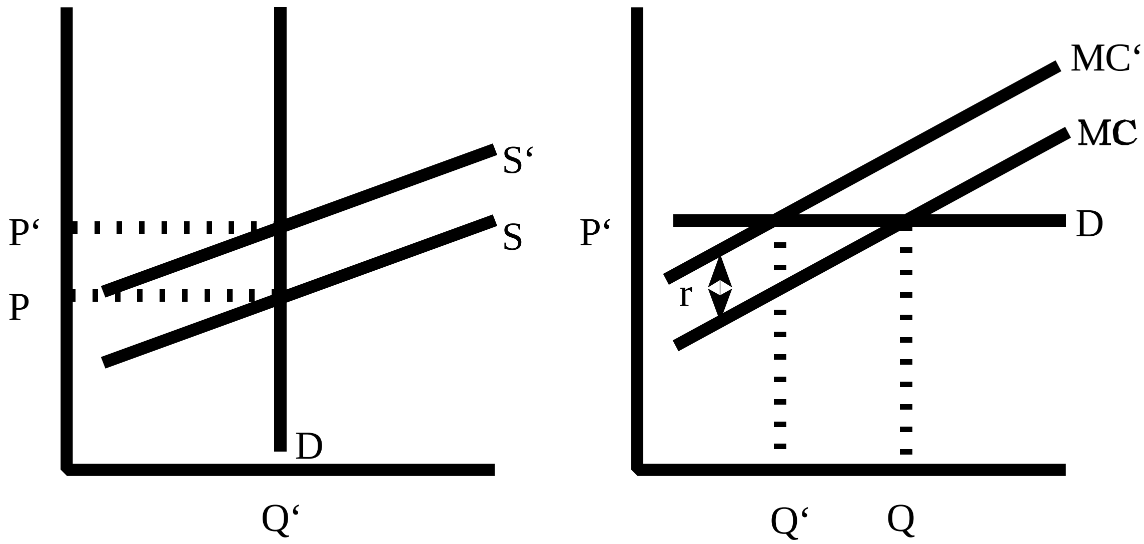


Figure 1 Difference between profit maximizing and revenue maximizing price and output for a retail establishment with monopoly power.



Product Demand Faced by Franchiser

Local Market Demand Faced by Franchisee in a Competitive Market

Figure 2 Incidence of a franchiser-set royalty rate set on differentiated product sold by franchisees in a competitive market.

density of their own and competing outlets within that area. Few researchers have studied this phenomenon.

Empirical Analysis of Establishment and Market Characteristics by Organizational Status

Two preliminary empirical models are estimated, one which explores company ownership within franchised chains, the other examining characteristics of multi-establishment franchisee-owned outlets. The decision of whether to vertically integrate through company ownership of retail outlets or to coordinate with independent retailers rests primarily with the franchiser. The franchiser also decides with whom to coordinate and how many outlets a single franchisee may operate. These decisions will be influence by factors concerning local demand conditions, expected return on investment, and the agency cost factors discussed above. Previous theoretical and empirical work provides guidance in identifying many of these factors.

The models estimated here exploit the use of detailed, establishment-level data to demonstrate how outlet characteristics vary by type of ownership status. The objective is to identify how particular characteristics of individual outlets, including market location characteristics, vary according to whether the outlet is owned by a franchiser or a franchisee, and if owned by a franchisee, whether or not it is part of a multi-establishment operation.

The analyses employ establishment-level data to estimate the following relationship:

Probability of outlet ownership status = f(establishment characteristics, local market characteristics)

Establishment characteristics include such factors as annual sales, payroll and seating capacity. Market characteristics include various indicators based on the size and population density of the county in which the outlet in located, and per capita income within the county. Many of the establishment characteristic variables are likely in fact to be a function of ownership status, if we assume that different organizational forms result in different employment and sales strategies, for instance. This possible endogeniety is not addressed here directly, other than to acknowledge that further exploration in this area is required. It is assumed that franchisers make rational decisions as to which outlets to operate internally or to franchise, and characteristics of the particular local markets likely enter into the decision process. Hence the interest in variables such as local income and other county characteristics.

The data used in the analyses and the model details are described below.

Data

Census of Retail Trade micro-data from 1992 was used for this analysis. This data reports sales and employment information for every retail establishment with paid employees in the U.S. For SIC 58 (eating and drinking places), this includes 433,608 unique observations. Within SIC 58, our focus is on the fast food industry segment, consisting in 1992 of 164,341 individual establishments. In addition to basic sales and employment information collected from each establishment, a sample of establishments are also asked to provide more detailed information, including, in the case of SIC 58, whether the establishment is part of a franchise, and if so, whether it is owned by the franchiser or the franchisee. This data is the most complete information available on individual establishments for the fast food industry. All analyses were performed while working at the Center for Economic Studies (CES) Research Data Center (RDC) in Washington, DC.

Along with Census of Retail micro-data, data collected by the Bureau of Economic Analysis (BEA) was used to describe economic characteristics of individual counties. This was acquired from the Regional Economic Information System (REIS) cd-rom for 1992.

For this research, all analyses focus on establishments which operate as a part of a franchise chain. The first analysis compares characteristics of company owned establishments with those of franchisee owned ones, the second compares single establishment and multi-establishment franchisees, and the third examines the effect of local concentration of establishment ownership (as by multi-establishment franchisees), along with other establishment and market characteristics, on establishment sales.

Characteristics of Company Owned Establishments Within Franchise Chains

As noted above, the choice of whether to vertically integrate into retail distribution or to coordinate with independent retailers lies with the franchiser. This analysis explores the factors that could be important in this decision, and variations in the characteristics of outlets under either type of ownership arrangement.

The model is estimated as follows:

Probability of company ownership =
f(sales, payroll, per capita income, new establishment, seating capacity, establishment share of parent firm in local market, dependence of local market on tourism trade, degree of urbanization, primary menu item indicators)

Establishment sales and payroll are intended to capture agency costs associated with company ownership, and the influence of market demand conditions. Since the franchiser ultimately decides which outlets to operate internally, it would be expected to maintain direct control over those outlets which are located in the markets with the greatest sales potential. This implies a positive relationship between establishment sales and the probability that it is owned by the franchiser. However, given the agency costs of employee monitoring discussed above, labor costs per establishment are likely to be greater at company owned outlets. Therefore it would be reasonable to expect that establishments which have high payroll costs relative to their sales would have an increased likelihood of being company owned. This implies an unambiguous positive expectation for payroll costs, while establishment sales could either have a positive sign or negative sign–the former indicating a strong tendency for company owned outlets to be located in high consumer demand markets, the latter suggesting that the favorable demand conditions in those markets are off-set by the higher payroll costs incurred in these outlets, resulting in lower sales *given* payroll costs.

The age of the establishment, i.e., whether it is relatively “new”, is captured with an indicator variable equal to 1 if the establishment was not included in the 1987 Census. This will give an indication of whether the growth in the industry is occurring primarily through franchising or company ownership. It is assumed that most growth occurs through franchising, so establishments that were created after the most previous Census are presumed less likely to be company owned. Thus, this variable is expected to have a negative relationship with the probability of company ownership.

Seating capacity is a measure of the number of patrons that can be seated at each establishment. Given the agency costs of monitoring employees, we would expect company owned outlets to smaller, possibly employing fewer employees. Thus the expected sign on this variable is negative. The industry trend towards greater use of “satellite” outlets–those which offer little or no seating capacity--is well documented. If these types of outlets tend to have fewer employees, we might expect them to more often than not be company owned.

The establishment share of the parent firm in the local market is calculated for each establishment as the proportion of total fast food establishments in each county that are operated by the firm which operates the current establishment. A franchiser might either operate several stores in the same market (i.e. county), or intersperse their establishments throughout different markets. A reason for interspersing company owned establishments throughout various markets could be to track local demand conditions and monitor the performance of franchisee establishments. On the other hand, a franchiser might be inclined to keep profitable markets mainly to themselves, thereby increasing the share of total outlets operated by the franchiser in those markets. Furthermore, since company-owned outlets need to be closely monitored to prevent manager shirking, clustering company owned outlets in nearby markets might facilitate this. Finally, if company owned outlets are an important source of profit to the franchise, franchisers might be inclined to exploit any potential market power in the local market by restricting the number of competing establishments where franchisers tend to locate. If “territorial encroachment”, if serves to diminish local market power, it is unlikely that franchisers would engage in this strategy among their own outlets. The sign of the parameter estimate on this variable will serve as an indication as to whether franchisers intersperse their own outlets as a strategy of monitoring franchisees, or if franchisers view company owned establishments as a profit center and thereby exploit local market power by restricting entry of franchisees.

The dependence of the local market on the tourist trade is measured as total hotel, motel, and amusement park sales in each county per capita. In markets with a high proportion of transient consumers, brand name reputation may be more important than the reputation of the local franchisee, especially since the local establishments in these areas will tend not to have a high proportion of loyal, repeat customers. Therefore, in order to preserve brand name reputation for the chain, franchisers are assumed more likely to operate their own stores in these areas. Both Norton (1988) and Thompson (1992) employ a similar variable in their analyses (based actually on transportation expenditures rather than tourism expenditures), but they appear to be more concerned with brand name preferences compared to independent, non franchised establishments instead of the franchisers desire to protect brand name capital. Hence their results did not accord with their expectations.

Finally, the degree of urbanization is captured using indicator variables corresponding to the rural-urban continuum codes for each U.S. county. These classification codes describe counties by degree of urbanization and nearness to metro areas. There are ten county types ranging from central counties of metropolitan areas with populations of 1 million or more, to completely rural counties or those with less than 2,500 inhabitants. In this analysis, the codes corresponding to non-metro counties are combined into two categories: large urban (urban population of 20,000 or more), and small urban/rural (urban population of less than 20,000 or completely rural population). We are left with six distinct county classifications based on population. In the regression model, the indicator for central counties in metropolitan areas of 1 million or more is omitted.

The primary menu indicators are binary variables controlling for 12 different possible industry segments based on the type of food offered at the outlet. These include such menu types as hamburger, Italian, Mexican, American, chicken, pizza, etc. Including these indicators allows for the possibility that firms within certain segments of the fast food market have different likelihoods of engaging in franchising as an organizational form. The expected signs of these effects are ambiguous.

Results[3]:

The results support the assertion that company owned and franchisee owned establishments differ along lines of establishment characteristics, market characteristics, and geographic factors. Regarding establishment characteristics, there appears to be a tendency for company owned outlets to have both slightly lower sales, and somewhat higher labor costs than franchisee owned establishments. Dropping payroll costs from the analysis changes the sign on establishment sales. The results suggest that, ceteris paribus, company owned establishments have lower sales given their payroll expenditures, which is consistent with agency theory arguments that suggest company owned establishments are not operated quite as efficiently as franchises. This is also consistent with findings by Krueger, 1991. Since franchisees are the claimant of all residual profits from the establishment, these owners have a greater incentive to cut costs, which might include providing more of their own labor, higher fewer employees, and/or paying employees a lower wage. Plus, mangers salary is included in the payroll of company owned establishments, while owner-managers likely do not draw a traditional wage, resulting possibly in lower labor costs reported for franchisee owned outlets..

Establishments that are relatively new are less likely to be company owned, illustrating that most of the growth in the industry occurs through the addition of franchisee outlets. There is also evidence that company owned outlets tend to be smaller in size. As the number of seats in the establishment increases, the likelihood that it is company owned decreases somewhat. Given the agency costs associated with managing company owned stores, it is likely that the franchisers prefer to manage smaller stores, where possibly the number of employees needed to staff the outlet is somewhat lower.

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[3] The numeric results from this analysis are suppressed pending approval of disclosure from the Center for Economic Studies (CES), United States Census Bureau. The complete results will be available from the author once CES determines that no firm-specific information can be obtained through manipulation of the numeric output.

One of the strongest results concerns the share of total outlets owned in the market by the parent firm of any particular outlet. This can be interpreted as a measure of firm market share in the local markets in which they operate. The results indicate that when a single firm owns a large share of the outlets in any particular county, the likelihood that those outlets are company owned increases. This has several implications. First, it suggests that franchisers keep certain markets primarily to themselves --presumably the most lucrative ones – by restricting the number franchisee outlets opened in these markets. This might allow franchisers some degree of local market power in those markets in which they operate. It also shows that franchisers tend to concentrate store ownership geographically instead of widely dispersing stores throughout various markets. This presumably reflects an attempt to minimize costs of monitoring their own establishments.

In terms of market characteristics, company owned stores are more likely to be located in higher income areas, and in areas in which tourism (lodging place and amusement park sales) is an important part of the economy. The former result provides further evidence that franchisers seek out markets with the strongest sales potential in which to locate their own establishments. The latter result provides credence to the argument that franchisers place units in areas with large transient populations in order to protect brand name reputation. Given the relatively low incidence of repeat customers in markets where the population is transient, franchisees might not have as much of an incentive to maintain minimum levels of product quality.

The degree of urbanization indicators suggest that, *ceteris paribus*, company owned stores are most likely to be located in central counties of major metropolitan areas, and their probability of placement decreases steadily as the county becomes less urban. They are least likely to be placed in rural counties or those with small urban populations. This likely reflects both a minimization of monitoring costs and an emphasis on placing units where demand conditions are most favorable. Plus, similar to the tourism results, the transient population in central counties of major metropolitan areas is likely high due to tourism and business travel.

Multi-unit Franchisee Firms

As noted above, most theoretical and empirical analyses assume that franchisees are owners and operators of single-unit establishments. This bolsters the argument that franchising minimizes agency costs since the franchisee actively manages each unit and is the claimant of residual profits. But the fact remains that many franchisees are multi-unit operators, and as table 2 suggests, the incidence of multi-unit franchising has been on the rise over the past couple decades.

We might expect that the agency cost arguments of the gains to franchising are weakened for multi-unit franchisees, since these firms must also hire managers to run the daily operations, similar to establishments operated by the franchiser. However, it is also assumed that obtaining high-quality, competent franchisees is difficult, and the franchiser might be more willing to allow an already successful franchisee to open another outlet, rather than taking the risk of selling a franchise to an unproven entrepreneur.

This part of the analysis examines how characteristics of establishments operated by multi-unit franchisees differ from those operated by single unit franchisees. The model estimated is similar to the one above, expect that it is estimated only on the sample of franchisee operated establishments, and it is predicting the probability that an establishment is operated by a multi-unit firm. Since by definition each single unit franchisee has a small share of total establishments in the market (a share equal to 1/total number of establishments), the share of establishments in each market operated by the parent firm is omitted as an independent variable. If included, this measure could only increase the likelihood that a firm is part of a multi-establishment firm, especially since these firms are likely to operate many of their units within the same market. All other variables included are defined the same as in the previous model. Thus, the model that is estimated is as follows:

Probability that an outlet is part of a multi-establishment franchise =
f(sales, payroll, per capita income, new establishment, seating capacity, dependence of local market on tourism trade, degree of urbanization, primary menu item indicators)

Results[4]

Differences between single and multi-establishment franchised outlets are evident through the model estimates. An important difference pertains to establishment sales and payroll. The estimates indicate that, given payroll costs, establishments owned by multi-establishment franchisees have somewhat higher sales per outlet than single-establishment franchisees. This suggests economies to scale in establishment ownership. Despite the fact that multi-establishment franchisees are less likely than their single-establishment counterparts to actively manage individual outlets, it appears that multi-establishment outlets are operated with greater efficiency. The likely explanation is that to become a multi-establishment franchisee the manager had to demonstrate superior skills and ability as a single establishment operator, and the benefit to these skills also surfaces in the additional units the operator adds. There might still be an agency problem in the management of multi-establishment units, but compared to operators of single establishments, the skills possessed by managers of multi-unit firms appear to more than compensate for the lack of dedicated management by an owner-operator of a single establishment.

The results also show that compared to single establishment operators, outlets operated by multi-establishment franchisees tend to be located in slightly lower income areas. This result is somewhat counter to a perception that multi-establishment firms would have the power to negotiate more favorable locations, given that higher income areas are expected to be more desirable from a demand standpoint. But several explanations exist. First, previous research (e.g. Kalnins and Lafontaine) has shown that multi-establishment franchisees tend to operate establishments that are geographically close together, i.e. in the same market area. In fact, franchisees are often granted the exclusive right to operate all establishments within a certain market area, through what is know as an area development agreement. There is obvious value to

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a franchisee, in terms of potential monopoly rent, to enter into such an agreement. Hence a franchiser might only enter into such agreements as a way of developing those markets which have less desirable demand characteristics. Furthermore, even without such an agreement, a franchisee likely develops the most profitable locations first, and then moves into areas where the marginal returns are somewhat less. Multi-establishment firms would also be better able to mange the risk of operating an establishment in an area where demand is less certain. All of these factors could increase the likelihood that multi-establishment outlets are located in lower-income markets where demand is less certain.

There is no indication that multi-establishment firms have any greater tendency than their single establishment counterparts to be located in areas where the tourism trade is important. The results in the previous section showed a greater tendency for company owned stores to be located in these areas, presumably to protect the brand-name reputation from operators who might shirk on quality. While multi-establishment franchisees have potentially more to loose from an erosion of brand reputation than do single establishment operators, they appear to have no greater likelihood of obtaining locations in areas where the transient population is large.

The variable measuring seating capacity is negatively and slightly significant. This indicates a weak tendency for multi-establishment firms to be smaller on average than those operated by single-establishment operators. This result is not surprising since multi-establishment operators, like franchisers, presumably prefer outlets which are more easily managed with fewer employees.

Despite the growing share of establishments that are operated by multi-establishment franchisees, outlets which have existed for less than five years are more likely to operated by single-establishment franchisees. What is unknown from this study is whether single establishment outlets are also more likely to fail, in which case this variable could be capturing higher tendencies for outlet turnover. Bates (1997) studies survival rates of franchised outlets using a similar data set, and finds evidence that single establishment firms indeed have higher failure rates. Regardless, these results suggest that franchisers in fast food still primarily enter into agreements with single establishment firms, and the growing presence of multi-establishment operators in the fast food industry might overwhelmingly reflect survival rates.

In terms of county characteristics, the indicator variable for medium-sized metropolitan areas--those with between 250,000 to 1 million inhabitants – suggests multi-establishment firms favor these areas over central counties of metro-areas with populations greater than 1 million. Recall that the results from the previous section showed a tendency for company owned outlets to be located in these large metro-areas, which shows that franchisers do not like to compete with multi-establishment franchisees in their own markets. The indicator variables for the fringe counties of these large metro-areas, and for metro-areas of less than 250,000 are not significant.

Outlets in non-metro urban and rural counties have a significantly lower likelihood of being part of a multi-establishment franchisee enterprise. This is not surprising, since these areas generally do not have the population base to support as many outlets as in metropolitan areas. Franchisers are unlikely to grant any firm excessive monopoly power in any one area, and other research has indicated a tendency for multi-establishment outlets to all be located in close geographic proximity. Coupled with the results from the previous section, it appears that outlets in small urban and rural counties are primarily single establishment, franchised operations.

Conclusions

It is clear that, within the fast food industry, the characteristics of individual outlets vary along the lines of ownership status and organizational form. Consistent with expectations based on theory, agency costs of monitoring appear to play an important role in determining the organizational structure of this industry, as well as the characteristics of individual outlets. Furthermore, evidence suggests that franchisers choose locations for their own outlets to maximize their presence within certain local markets, which likely reflects a desire to develop the most profitable markets internally, and to exploit potential market power within those markets. As means of protecting their most profitable asset, namely the brand name reputation, franchisers also have a greater tendency to locate company owned outlets in markets where the transient population is likely to be greatest.

The analysis of multi-establishment franchisees suggests economies to scale in outlet ownership. Multi-establishment franchisees also have a greater tendency than their single establishment counterparts to locate in lower income areas, suggesting a greater withstand demand risk.

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